15. The remote feeder reactance coil of claim 1 characterized in that said primary winding (102; 202) is spirally wound up onto a core (106; 206).--

REMARKS

In the Office Action dated October 21, 2002, the Examiner has objected to the specification, the drawings, and claim 13 as containing various informalities. Claims 2, 11 and 12 were rejected under 35 U.S.C. §112, second paragraph as being indefinite. Claims 1, 6, 8, 11 and 13 were rejected under 35 U.S.C. §102(b) as being unpatentable over U.S. Patent No. 4,961,049 to Ghislanzoni (hereinafter "Ghislanzoni"). Claims 2-5, 7, 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ghislanzoni in view of U.S. Patent No. 4,806,834 to Koenig (hereinafter "Koenig").

The specification has been amended to correct the informalities identified by the Examiner. On page 3, the first paragraph has been deleted to remove the reference to the claims. On page 4, the paragraph beginning on line 35 has been amended to add the reference numeral "12" for the signal transmission line. On page 6, the paragraph beginning on line 16 has been amended to include the reference numerals 204, 206, and 208. Also on page 6, the paragraph beginning on line 28 has been amended to change a typographical error of the reference character

for the terminal (on page 7, line 4) from "200" to "220" (the reference characters as shown in Figure 4 are correct).

Applicants have amended claim 2 to remove the ambiguity between parallel axes and a common axis, and have added new dependent claim 14 to address the fact that the axes can be common. Claim 11 has been amended to specify that the primary winding is spirally wound up onto a tubular body, to clarify claim 12. New dependent claim 15 has been added to include that the primary winding is spirally wound up onto a core. Claim 13 is an independent claim, and has been amended to include elements of claim 1 where necessary.

With respect to the rejection of the claims under 35 U.S.C. § 102(b) in view of Ghislanzoni, the applicants respectfully disagree. Ghislanzoni describes a measuring apparatus. Ghislanzoni does not teach or suggest use of a signal line to supply or withdraw energy, nor does Ghislanzoni disclose a signal transmission line at all. A person skilled in the art of transmission lines, and particularly so if the person is skilled in the art of supplying intermediate amplifiers with energy, would not regard a measuring apparatus as being relevant to an improved remote feeder reactance coil.

As used in the present claims, the terminology "remote feeder reactance coil for supplying energy to or withdrawing energy from signal transmission lines"

necessarily involves a transmission line which carries a high-frequency signal that should not be influenced. It is clearly implied in that terminology that there is a second (low) frequency to carry a feed current (see page 2, lines 34-38). It is the interdependency of these two frequencies that is addressed in the present application (see page 6, lines 4-14) and claimed by the present claims.

The remote feeder reactance coil of the present application is used for supplying energy to or withdrawing energy from a signal transmission line, which is clearly the opposite of what is intended in a measuring apparatus. In contrast, in a measuring apparatus such as the one disclosed in Ghislanzoni, there is no such interdependency between the two frequencies. Additionally, a measuring apparatus such as that disclosed by Ghislanzoni should have no influence on the system wherein the measurement is performed.

Even if some of the features disclosed in claims 1 and 13 of the present application may be found in a measuring apparatus, those features taken together do not constitute a remote feeder reactance coil as claimed. Claims 1 and 13 of the present application are distinguishable over Ghislanzoni. Since claims 6, 8, and 11 depend from claim 1, they are also distinguishable over Ghislanzoni.

With respect to the rejection of the claims under 35 U.S.C. § 103(a), in view of the combination of Ghislanzoni and Koenig, the applicants respectfully disagree.

The electrical circuit disclosed in Koenig is neither a remote feeder reactance coil nor is it intended to be used for supplying energy to or withdrawing energy from a signal transmission line. As a result, combining the teachings of the Koenig circuit with the teachings of the Ghislanzoni measuring apparatus would not lead a person skilled in the art to arrive at the remote feeder reactance coil of the present application.

In contrast, with the present invention, the energy to be supplied or withdrawn is not exchanged from one winding to the other as in Koenig, but using the coil as shown in Figure 1 of the present application along with, for example, an intermediate amplifier (see Figure 1 and page 4, line 35 to page 5, line 8). By grounding the coil via a capacitor, there is a voltage between the two terminals of the primary winding which is fed to the amplifier. If the only aim of the invention was to supply energy to or withdraw energy from a signal transmission line, the secondary winding would not be needed. As discussed in the present application at page 2, lines 34-38,

> It is the object of the invention to provide a reactionless connection of a high-frequency signal path and a low-frequency energy supply for signal transmission systems over an as broad as possible frequency range, at the same time keeping the required manufacturing effort small.

Based upon the foregoing remarks, neither the teachings of the Ghislanzoni

measuring apparatus nor the teachings of the Koenig circuit, either taken separately or combined, would lead a person skilled in the art to arrive at the remote feeder reactance coil of the present application.

It is respectfully submitted that the amendments and remarks made herein place pending claims 1-13 and new claims 14 and 15 in condition for allowance. Accordingly, entry of this amendment as well as reconsideration and allowance of pending claims 1-13 and new claims 14 and 15 are respectfully requested.

If the Examiner does not believe that the claims are in condition for allowance, the Examiner is respectfully requested to contact the undersigned at 215-568-6400.

Respectfully submitted,

Schmidt et al.

By_____
Gerald B. Halt, Jr.
Registration No. 37,633
(215) 568-6400

Volpe and Koenig, P.C.
Suite 400, One Penn Center
1617 John F. Kennedy Boulevard
Philadelphia, PA 19103

GBH/SJG/dc
Enclosure

Application No.: 09/868,391
Examiner: Jennifer A. Poker

37 CFR §1.121(b)(1)(iii) and (c)(1)(ii) SPECIFICATION AND CLAIM AMENDMENTS- MARKED UP VERSION

IN THE SPECIFICATION

Page 4, replace the paragraph beginning on line 35 with the following:

The transmission section 10 of a signal transmission line 12 shown in Fig. 1 essentially comprises a coaxial cable 14 which has two intermediate amplifiers 16 built into it. Said intermediate amplifiers 16 receive their energy via remote feeder reactance coils 18 of the inventive design which are grounded via a capacitor. The energy output via said remote feeder reactance coils 18 is input to the transmission section 10 (which - concerning energy supply - is separated from the adjacent transmission sections by capacitances 22) via a remote feeder reactance coil 20 for energy input which is likewise of the inventive design and is also grounded via a capacitor.

Page 6, replace the paragraph beginning on line 16 with the following:

Fig. 4 shows a remote feeder reactance coil 200 of a second embodiment. Since the remote feeder reactance coils 100, 200 of the first and second embodiments are identical in essential design features, design elements of the remote feeder reactance coil 200 of the second embodiment which are identical to those of the remote feeder reactance coil 100 of the first embodiment are marked with basically the same reference numerals as those of the first embodiment, but

increased by 100. In this respect, reference is also made to those parts of the description which concern the remote feeder reactance coil 100 of the first embodiment. In particular, reference sign 204 designates a tubular body, 206 designates a core, and 208 designates a terminal.

Page 6, replace the paragraph beginning on line 28 with the following:

The individual turns 210 of the primary winding 202 of the remote feeder reactance coil 200, which are electrically separated and insulated from each other by means of a varnish coating on the wire material of the primary winding 202, extend in direct and close contact on each other in a first area 222 and a second area 224, while they are spaced from each other in a third area 226 which extends between said first and second areas. Said secondary winding 212 which also includes an ohmic resistor 216 to give an attenuation circuit 218, has turns 214 which, viewed in the radial direction of the remote feeder reactance coil 200, extend on the external surface of the turns 210 in the first area 222. Said turns 214 contact each other through their varnish coatings. In the remote feeder reactance coil 200 of the second embodiment, the terminal [200] 220 of the primary winding 202 and the terminal of the secondary winding 212 are electrically interconnected.

IN THE CLAIMS

2. (Amended) The remote feeder reactance coil of claim 1 characterized in that said primary and said secondary windings (102; 112; 202; 212) have substantially parallel winding axes [axis, in particular one common winding axis].

11. (Amended) The remote feeder reactance coil of claim 1 characterized in that said primary winding (102; 202) is spirally wound up onto [a core (106; 206) or] a tubular body (104; 204).

13. (Amended) In a [A] signal transmission system with signal transmission lines, a remote feeder reactance coil for supplying energy to, or withdrawing energy from, said signal transmission lines, said remote feeder reactance coil comprising a primary winding (102; 202) of an electrically conductive material which carries the feed current and an attenuation circuit (118; 218) including a secondary winding (112; 212) of conductive material, wherein said secondary winding (112; 212) and said primary winding (102; 202) interact with each other through capacitive, inductive, or capacitive and inductive coupling, wherein the signal transmission system comprises

[whose] intermediate amplifiers (16) which are supplied with electrical energy via said signal transmission lines (14), with said remote feeder reactance

coils (18, 20) being used for this purpose [being of the type as claimed in claim 1].